FIRST YEAR SURVIVAL AND DENSITIES OF 1984 PLANTATIONS

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INTRODUCTION

The Timber Management Branch of the New Brunswick Department of Natural Resources and Energy has been assessing survival and growth in plantations on Crown Land since 1977. This report presents information on heights and first year survival of 1984 plantations. The information is presented in tables and graphs and interpretation of the data is left to the reader. Description of the methods used can be found in "First Year Survival and Densities of 1982 plantations", published report, ISSN 0226-9104; copies of which are available from Timber Management Branch.

TABLE 1. SURVIVAL IN PERCENT ONE YEAR AFTER PLANTING BY SPECIES AND STOCK TYPE FOR 1984 PLANTATIONS

LICENSE	BLACK SPRUCE				WHITE SPRUCE	JACK PINE			RED PINE	LARCH
	BR[1]	PP[2]	SB[3]	CA[4]	BR	BR	PP	SB	PP	PP
Upsalquitch	-	96	-	-	-	-	97	-	-	-
Nepisiguit	-	95	-	-	-	-	97	-	-	88
Lower Miramichi	-	89	-	-	-	-	89	-	-	80
Upper Miramichi	-	83	-	-	-	-	90	-	-	-
Kent	-	97	-	-	-	-	98	-	-	-
Queens-Charlotte	82	82	-	-	-	85	93	100	89	-
Fundy	41	90	-	-	-	-	90	92	-	88
York	91	80	88	-	56	-	99	-	-	-
Carleton	-	84	-	-	-	-	94	-	-	-
Restigouche-Tobique	75	92	90	94	-	-	-	-	-	-
Provincial Summary	80	89	89	94	56	85	92	93	89	86

1 Bare root stock
2 Paper pot stock
3 Styro block
4 Can Am 3

TABLE 2. HEIGHT AT TIME OF PLANTING AND AFTER ONE YEAR BY SPECIES AND STOCK TYPE FOR 1984 PLANTATIONS#

LICENSE		BLACK SPRUCE				WHITE SPRUCE	JACK PINE			RED PINE	LARCH
		BR[1]	PP[2]	SB[3]	CA[4]	BR	BR	PP	SB	PP	PP
Upsalquitch	Init*	-	11	-	-	-	-	19	-	-	-
	YR 1+	-	20	-	-	-	-	46	-	-	-
Nepisiguit	Init	-	14	-	-	-	-	13	-	-	15
	YR 1	-	26	-	-	-	-	33	-	-	27
Lower Miramichi	Init	-	11	-	-	-	-	10	-	-	9
	YR 1	-	18	-	-	-	-	17	-	-	13
Upper Miramichi	Init	-	12	-	-	-	-	10	-	-	-
	YR 1	-	24	-	-	-	-	21	-	-	-
Kent	Init	-	10	-	-	-	-	19	-	-	-
	YR 1	-	20	-	-	-	-	35	-	-	-
Queens-Charlotte	Init	23	12	-	-	-	21	14	13	5	-
	YR 1	41	24	-	-	-	38	37	24	11	-
Fundy	Init	21	11	-	-	--	-	16	16	-	25
	YR 1	26	24	-	-	-	-	34	37	-	37
York	Init	25	15	14	-	16	-	21	-	-	-
	YR 1	31	32	25	-	19	-	52	-	-	-
Carleton	Init	-	14	-	-	-	-	7	-	-	-
	YR 1	-	22	-	-	-	-	19	-	-	-
Restigouche-Tobique	Init	18	16	18	20	-	-	-	-	-	-
	YR 1	21	27	26	28	-	-	-	-	-	-
Provincial Average	Init	23	13	15	20	16	21	12	15	5	20
	YR 1	30	23	25	29	19	38	27	34	11	31

1 Bare Root Stock Type
2 Paper Pot Stock Type
3 Styroblock Stock Type
4 Can Am 3

Browse damage was noted on a number of seedlings.
* Height in cm at time of planting measured after seedlings were planted.
+ Height in cm one year after planting

TABLE 5. FIRST YEAR SURVIVAL AND HEIGHTS OF 1984 PLANTATIONS

License	Plantation	Site Preparation	Area (ha)	Species	Stock Type A	INITIAL YEAR Height (cm)	FIRST YEAR Survival (%)	FIRST YEAR Height (cm)
Upsalquitch	1010032848P	Shark Fin Barrels	24	jP	SB	18	92	28
	1010062848P	Burn	53	bS	PP	12	94	21
	1010062848P	Bracke	58	jP	PP	20	100	52
	1011170848P	Shark Fin Barrels	60	bS	PP	12	93	19
				jP	PP	20	90	51
	1011120848P	Shark Fin Barrels	87	bS	PP	12	97	23
	1011125848P	Shark Fin Barrels	130	bS	PP	9	99	17
Nepisiguit	1020004848P	Disc Trencher	37	jP	PP	8	95	23
	1020014848P	C & H Plow	20	jP	PP	15	97	51
	1020230848P	C & H Plow	66	bS	PP	9	93	19
	1020231848P	C & H Plow	40	tL	PP	15	88	27
	1020253848P	C & H Plow	89	bS	PP	16	96	28
	1020256848P	C & H Plow	101	bS	PP	14	95	27
	1020260848P	C & H Plow	55	jP	PP	16	99	42
Lower Miramichi	2030012848P	C & H Plow	108	bS	PP	12	89	19
	2030309848P	C & H Plow	85	jP	PP	11	100	15
	2030310848P	C & H Plow	33	jP	PP	10	97	16
	2030311848P	C & H Plow	43	jP	PP	7	100	14
	2030312848P	C & H Plow	18	jP	PP	9	78	15
	2030315848P	Burn & C & H Plow	75	jP	PP	8	82	12
	2030317848P	Burn & C & H Plow	30	jP	PP	7	81	11
	2030318848P	Burn & C & H Plow	15	jP	PP	9	80	14
	2030320848P	C & H Plow	65	jP	PP	8	82	15
	2030322848P	C & H Plow	23	jP	PP	12	95	26
	2030323848P	C & H Plow	56	jP	PP	14	100	25
	2030327848P	C & H Plow	14	bS	PP	12	82	17
	2030328848P	C & H Plow	76	jP	PP	10	87	15
				bS	PP	9	80	13

TABLE 3. (Continued)

License	Plantation	Site Preparation	Area (ha)	Species	Stock Type	INITIAL YEAR Height (cm)	FIRST YEAR Survival (%)	FIRST YEAR Height (cm)
Lower Miramichi (cont'd)	2030342848P	C & H Plow	16	bS	PP	9	91	17
	2030378848P	C & H Plow	65	bS	PP	9	78	9
	2030378848P	Burn & C & H Plow	65	jP	PP	9	84	20
	2030379848P	C & H Plow	30	bS	PP	14	96	18
Upper Miramichi	2040002848P	C & H Plow	74	bS	PP	12	76	27
				jP	PP	20	89	32
	2040003848P	C & H Plow	144	jP	PP	13	90	27
				jP	PP	14	88	29
	2040006848P	C & H Plow	138	jP	PP	13	83	31
	2040017848P	No-site Preparation	161	jP	PP	8	85	15
	2040018848P	No-site Preparation	84	jP	PP	7	93	16
	2040021848P	No-site Preparation	226	bS	PP	13	79	26
				jP	PP	7	89	13
	2040022848P	No-site Preparation	70	jP	PP	9	89	16
	2040029848P	Burn	130	jP	PP	7	90	14
	2040242848P	No-site Preparation	114	bS	PP	9	73	16
				jP	PP	20	99	43
	2040516848P	C & H Plow	151	bS	PP	13	81	24
	2040517848P	C & H Plow	180	bS	PP	8	93	15
				jP	PP	5	59	14
	2040541848P	C & H Plow	170	jP	PP	7	96	16
Kent	2050001848P	C & H Plow	16	bS	PP	10	97	20
	2050200848P	Burn & C & H Plow	27	jP	PP	19	98	34
	2050201848P	C & H Plow	28	jP	PP	18	98	36

TABLE 3. (Continued)

License	Plantation	Site Preparation	Area (ha)	Species	Stock Type	INITIAL YEAR	FIRST YEAR	
						Height (cm)	Survival (%)	Height (cm)
Queens Charlotte	2060003848P	Crusher	62	jP	PP	13	91	55
	2069971848P	Crusher	50	bS	PP	13	90	19
	2069984848P	Marden Roller	108	bS	PP	10	84	24
	2069999848P	Herbicide & Crusher	43	jP	BR&MP	21	86	39
	3060014848P	Marden Roller	11	bS	PP	14	63	18
				rP	PP	5	87	11
	3060042848P	Bracke	106	jP	BR	21	77	55
				jP	PP	16	90	36
	3060117848P	Marden Roller	98	bS	PP	16	75	26
	3060117848P	Marden Roller	28	rP	PP	5	94	10
	3060171848P	Marden Roller	85	jP	PP	10	100	31
				jP	SB	13	100	24
	4060010848P	Chains	57	bS	PP	9	85	29
	4060012848P	Chains	85	bS	BR	28	82	41
	4060012848P	Chains	22	jP	PP	21	94	55
	4060027848P	Chains	97	jP	PP	14	91	40
Fundy	3070004848P	Chains	76	jP	SB	16	92	57
	3070006848P	Chains	78	jP	PP	18	85	34
	3070011848P	Chains	207	bS	PP	8	87	21
				jP	PP	5	86	15
	3070012848P	Chains	55	bS	PP	13	92	28
	3070077848P	Chains	136	bS	PP	11	93	24
				tL	PP	23	90	39
	3079985848P	Bracke	123	bS	BR	21	41	26
				tL	PP	26	86	46
	4079999848P	Disc Trencher	122	jP	PP	19	96	40

TABLE 5. (Continued)

License	Plantation	Site Preparation	Area (ha)	Species	Stock Type	INITIAL YEAR Height (cm)	FIRST YEAR Survival (%)	FIRST YEAR Height (cm)
York	4080009848P	Shark Fin Barrels	146	bS	PP	14	88	25
	4080020848P	Shark Fin Barrels	105	bS	PP	15	80	32
	4081000848P	Shark Fin Barrels	82	bS	BR	28	95	35
				jP	PP	21	99	52
	4081001848P	Shark Fin Barrels	49	bS	BR	25	91	30
				wS	BR	16	56	19
Carleton	4090001848P	Shark Fin Barrels	75	bS	PP	14	93	23
	4090008848P	Shark Fin Barrels	18	bS	PP	15	84	20
				jP	PP	7	94	19
	4090010848P	Shark Fin Barrels	79	bS	PP	14	86	21
	4090011848P	Shark Fin Barrels	50	bS	PP	18	78	27
	4090012848P	Shark Fin Barrels	85	bS	PP	13	82	19
	4099002848P	Shark Fin Barrels	30	bS	PP	12	77	19
Restigouche-Tobique	1100135848P	Disc Trencher	53	bS	PP	17	91	28
	1100136848P	Disc Trencher	39	bS	PP	21	100	39
	1100138848P	Disc Trencher	23	bS	PP	22	97	44
	5100088848P	C & H Plow	64	bS	PP	18	90	26
	5100090848P	Disc Trencher	15	bS	PP	20	95	31
	5100093848P	Disc Trencher	27	bS	BR	16	70	23
	5100094848P	C & H Plow	32	bS	BR	18	88	18
	5100095848P	C & H Plow	38	bS	BR	20	72	20
	5100096848P	Bracke	23	bS	BR	24	80	30
	5100098848P	C & H Plow	39	bS	PP	14	81	28
	5100099848P	Disc Trencher	87	bS	PP	15	85	23
	5100101848P	Bracke	42	bS	PP	20	98	27
	5100109848P	Disc Trencher	10	bS	PP	13	91	22
	5100111848P	Bracke	10	bS	BR	20	95	22
	5100112848P	C & H Plow	11	bS	PP	17	95	37

TABLE 3. (Continued)

License	Plantation	Site Preparation	Area (ha)	Species	Stock Type	INITIAL YEAR	FIRST YEAR	
						Height (cm)	Survival (%)	Height (cm)
Restigouche-Tobique (cont'd)	5100119848P	Burn	88	bS	PP	20	97	26
	5100124848P	C & H Plow	22	bS	PP	18	89	26
	5100127848P	C & H Plow	32	bS	PP	16	86	24
	5100128848P	C & H Plow	30	bS	PP	14	86	22
	5105004848P	C & H Plow	165	bS	PP	10	96	25
	5105005848P	C & H Plow	90	bS	PP	16	94	30

A SB - Styroblock Stock Type
PP - Paper Pot Stock Type
BR - Bare Root Stock Type
MP - Multipot Stock Type